

Structuring the Internet to be a Source of Knowledge

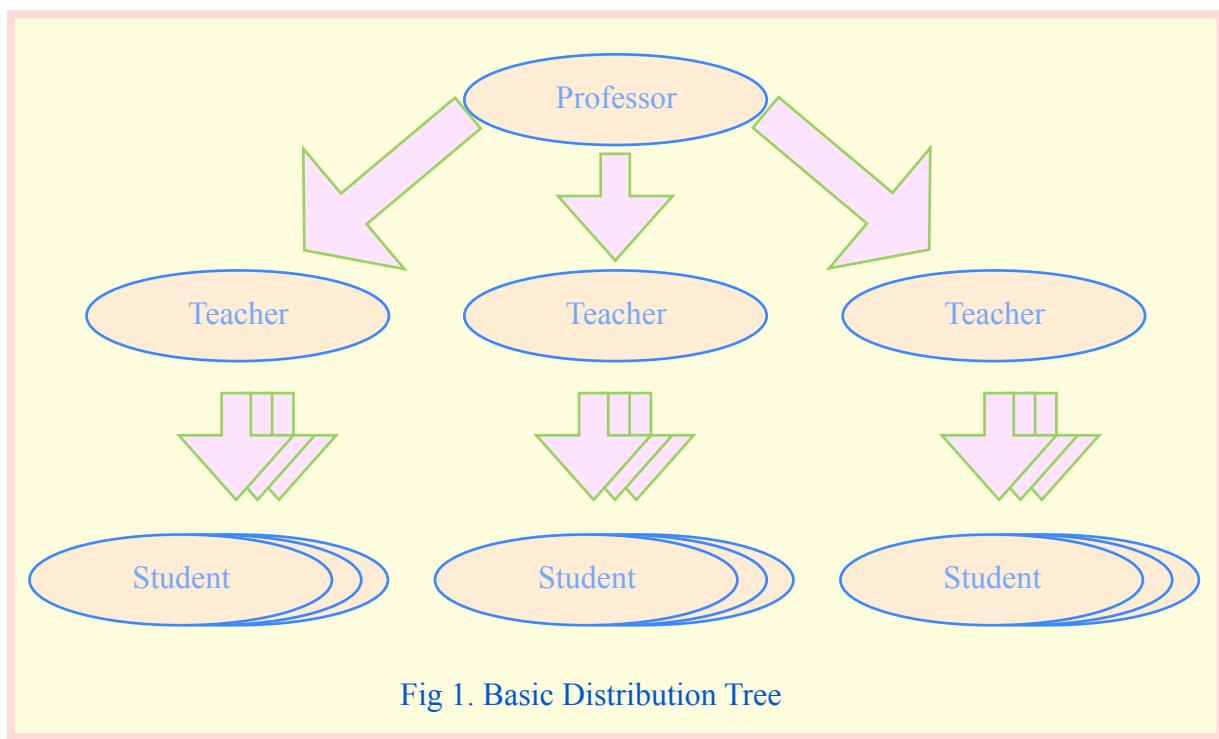
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One of the main problems with the internet is that it is a vast hodgepodge of information with no defined structure. It does not reflect the inherent structure of knowledge and once you begin traversing the various links you can get distracted into unwanted areas. Unfortunately there are those who will try and discredit useful and powerful knowledge simply because they wish to disrupt and cause chaos. Often times this may be due only to exuberance, but there may also be more disruptive influences. So what can we do to remedy this situation. The most important remedy is the proper use of language. The proper localisation of language, and the development of what I call Invincible Computation, *Dílháireamháiocht Dochalta*.

The most important aspect of any source of knowledge is appropriateness. Is the information appropriate to the student, teacher, or professor. This was the basic design that I created with Peter and Jim, when we conducted the initial research on the Simple Sums project early in 2000. So the basic distribution tree looks as follows.



This highlights the three levels of teaching, the three levels of knowledge. In effect knowledge flows from the professorial level, to the teachers level, to the students level. There also needs to be a feedback flow, from the student, to the teacher, to the professor. So the arrows shown above should be bi-directional.

There is however one level which is not explicitly included in this model, and in one sense it is the most important level, that is the parental level. Every parent wants the best education for their child,

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and there role in the educational system must be recognised and reinforced. It is simply not enough to have parent's councils, and a national movement of parent bodies. I know from my own experience that such organisations do not have the ability or skill to truly defend the position of parents. Yesterday I took a taxi across Cork city, and the taxi man told me that his wife was very much involved in the teaching of Science and Mathematics. He said ' but she does not teach that new fangled rubbish,' he was referring of course to the much vaunted Project Maths, which has been introduced into our educational system with little or no consultation with parents. As I mentioned before, I had a look at the curriculum, and those that designed it simply do not have the experience of systems design or the computational experience to implement such sweeping changes. I am severely critical of the National Council for Curriculum and Assessment (NCCA), the State Exams Commission, and the university sector who all participated in it's introduction. The last time such sweeping changes were introduced into our educational system was I believe in 1966, when I was ten years of age, and a *victim* of the changes. Some group of academics advised the then minister for education that the introduction of the *New Mathematics*, was necessary. Perhaps so, but not at the expense of the traditional computational techniques which were used in daily life. I grew up in a small shop in Tralee and I often asked my mother how she could do the tot, in her head. She would have said, 'but we learned it in school. Don't you do it now?' Of course we didn't as our heads were being filled with abstractions. I was lucky in that for some reason I still succeeded, but many were not. I mentioned this at the Jack Lynch seminar in University College Cork, a number of years ago. Calling it the greatest mistake in the history of Irish Education.

If we are to take corrective action to remedy those past mistakes, it is necessary to perform a complete systems analysis of our educational system. Also it is necessary to reduce the administrative overload. A good indicator of the coherence of an organisation is to see the internal structure as represented by the number of sub-units in the telephone directory. I have always been amazed at the number of sub-units within the Department of Education, most of which do not communicate properly with each other. I remember once contacting such a sub-unit in DCU with the supposed job of being responsible for the use of computer based technology in education. I rang them in relation to my own work, and was appalled that they could not comprehend my developments, and plainly were not interested. As you know I spent 12 years as an officer in our Army, and one thing about the Army is that it has a similar structure in each barracks, and in each Army unit. When I went in to an unfamiliar barracks or an unfamiliar Army unit I knew my way around because the basic structure did not change. As I have mentioned before there are a lot my former colleagues in the educational sector, and they should be encouraged to use their knowledge of Staff Duties to improve the administrative structure of education management. I know that this is a very big issue giving consideration to the forthcoming budget, and the resulting savings would far outweigh the paltry €20,000,000.00 proposed in the abolition of the Seanad. However if this is to work, the systems analysis must be reported directly to the Minister for Education, otherwise the natural entropy of the Department of Education will cause further, as I call it 'digital rust.'

This has not dealt so much with the internet, but with the flow of knowledge. The internet can be a real source of knowledge, but we must first design the information flow.

Finally, shortly, I will begin outlining my own structure, designed to create invincibility in any area of action.